# Product data sheet
## Characteristics

# LC1D12E7C
Contactor, TeSys Deca, 3P(3 NO), AC-3/ AC-3e, 0 to 440V, 12A, 48VAC 50/60Hz coil, Screw terminal




⚠ End of Commercialisation

## Commercial status
End of Commercialisation :

## Main

| | |
|---|---|
| Range | TeSys Deca |
| Range of product | TeSys Deca |
| Product or component type | Contactor |
| Device short name | LC1D |
| Contactor application | Motor control<br>Resistive load |
| Utilisation category | AC-4<br>AC-1<br>AC-3<br>AC-3e |
| Poles description | 3P |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| [Ie] rated operational current | 25 A (at <60 °C) at <= 440 V AC AC-1 for power circuit<br>12 A (at <60 °C) at <= 440 V AC AC-3 for power circuit<br>12 A (at <60 °C) at <= 440 V AC AC-3e for power circuit |
| [Uc] control circuit voltage | 48 V AC 50/60 Hz |

## Complementary

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|---|---|
| Motor power kW | 7.5 KW at 500 V AC 50/60 Hz (AC-3)<br>3 KW at 220/240 V AC 50/60 Hz (AC-3)<br>5.5 KW at 380/400 V AC 50/60 Hz (AC-3)<br>5.5 KW at 415/440 V AC 50/60 Hz (AC-3)<br>7.5 KW at 660/690 V AC 50/60 Hz (AC-3)<br>7.5 KW at 500 V AC 50/60 Hz (AC-3e)<br>3 KW at 220/240 V AC 50/60 Hz (AC-3e)<br>5.5 KW at 380/400 V AC 50/60 Hz (AC-3e)<br>5.5 KW at 415/440 V AC 50/60 Hz (AC-3e)<br>7.5 KW at 660/690 V AC 50/60 Hz (AC-3e) |
| Compatibility code | LC1D |
| Pole contact composition | 3 NO |
| Protective cover | With |
| [Ith] conventional free air thermal current | 25 A (at 60 °C) for power circuit<br>10 A (at 60 °C) for signalling circuit |
| [Icw] rated short-time withstand current | 105 A 40 °C - 10 s for power circuit<br>210 A 40 °C - 1 s for power circuit<br>30 A 40 °C - 10 min for power circuit<br>61 A 40 °C - 1 min for power circuit<br>100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit |

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| Associated fuse rating | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>40 A gG at <= 690 V coordination type 1 for power circuit<br>25 A gG at <= 690 V coordination type 2 for power circuit |
| Average impedance | 2.5 MOhm - Ith 25 A 50 Hz for power circuit |
| [Ui] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1 |
| Overvoltage category | III |
| Pollution degree | 3 |
| [Uimp] rated impulse withstand voltage | 6 KV conforming to IEC 60947 |
| Safety reliability level | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| Mechanical durability | 15 Mcycles |
| Electrical durability | 2 Mcycles 12 A AC-3 at Ue <= 440 V<br>0.8 Mcycles 25 A AC-1 at Ue <= 440 V<br>2.2 Mcycles 9 A AC-3 at Ue 660/690 V<br>2 Mcycles 12 A AC-3e at Ue <= 440 V<br>2.2 Mcycles 9 A AC-3e at Ue 660/690 V |
| Control circuit type | AC at 50/60 Hz |
| Coil technology | Without built-in suppressor module |
| Control circuit voltage limits | 0.3...0.6 Uc (-40…60 °C):drop-out 50/60 Hz<br>0.8...1.1 Uc (-40…60 °C):operational 50 Hz<br>0.85...1.1 Uc (-40…60 °C):operational 60 Hz |
| Inrush power in VA | 70 VA 60 Hz cos phi 0.75 (at 20 °C)<br>70 VA 50 Hz cos phi 0.75 (at 20 °C) |
| Hold-in power consumption in VA | 6 VA 60 Hz cos phi 0.3 (at 20 °C)<br>7 VA 50 Hz cos phi 0.3 (at 20 °C) |
| Operating time | 12...22 ms closing<br>4...19 ms opening |
| Connections - terminals | Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib<br>Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib<br>Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: flexib<br>Power circuit: screw clamp terminals 2 1…2.5 mm² - external diameter: 8 mm - cable stiffness: fle<br>Power circuit: screw clamp terminals 1 1…4 mm² - external diameter: 8 mm - cable stiffness: solid<br>Power circuit: screw clamp terminals 2 1…4 mm² - external diameter: 8 mm - cable stiffness: solid<br>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 1…2.5 mm² - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1…4 mm² - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1…4 mm² - cable stiffness: solid without cable end |
| Tightening torque | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 1.7 N.m - on cable connector - with screwdriver flat Ø 6 mm M3.5<br>Power circuit: 1.7 N.m - on cable connector - with screwdriver Philips No 2 M3.5<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver pozidriv No 2 |
| Auxiliary contacts type | Type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>type mirror contact 1 NC conforming to IEC 60947-4-1 |
| Auxiliary contact composition | 1 NO + 1 NC |
| Signalling circuit frequency | 25...400 Hz |
| Minimum switching current | 5 MA for signalling circuit |
| Minimum switching voltage | 17 V for signalling circuit |
| Insulation resistance | > 10 MOhm for signalling circuit |
| Non-overlap time | 1.5 Ms on de-energisation between NC and NO contact<br>1.5 Ms on energisation between NC and NO contact |
| Mounting support | Rail<br>Plate |

## Environment

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|---|---|
| Standards | IEC 60947-1<br>IEC 60947-4-1<br>GB/T 14048.4 |
| Product certifications | CE[RETURN]UKCA[RETURN]CCC |
| IP degree of protection | IP2X front face for main circuit conforming to IEC 60529<br>IP2X front face for coil circuit conforming to IEC 60529 |
| Protective treatment | TH conforming to IEC 60068-2-30 |
| Permissible ambient air temperature around the device | -40…60 °C operation<br>60…70 °C with derating<br>-60…80 °C storage |
| Operating altitude | 3000 m without derating |
| Fire resistance | 850 °C conforming to IEC 60695-2-11 |
| Mechanical robustness | Vibrations contactor open (2 Gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Vibrations contactor closed (4 Gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Shocks 11 ms contactor open (10 Gn) conforming to IEC 60068-2-27<br>Shocks 11 ms contactor closed (15 gn) conforming to IEC 60068-2-27 |
| Height | 77 Mm |
| Width | 45 Mm |
| Depth | 86 Mm |
| Net weight | 0.325 Kg |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 5.096 Cm |
| Package 1 Width | 7.903 Cm |
| Package 1 Length | 9.324 Cm |
| Package 1 Weight | 355.5 G |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 24 |
| Package 2 Height | 15.0 Cm |
| Package 2 Width | 30.0 Cm |
| Package 2 Length | 40.0 Cm |
| Package 2 Weight | 9.0 Kg |
| Unit Type of Package 3 | PAL |
| Number of Units in Package 3 | 384 |
| Package 3 Height | 60.0 Cm |
| Package 3 Width | 80.0 Cm |
| Package 3 Length | 75.0 Cm |
| Package 3 Weight | 130.336 Kg |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 65 |
| Total lifecycle Carbon footprint | 167 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 1.8104693167673787 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 2 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.5000692274168101 |
| Carbon footprint of the distribution phase [A4] | 0.5 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.0009920762362599874 |
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 164.27747658311026 |
| REACh free of SVHC | Yes |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 164 kg CO2 eq. |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| Sustainable packaging | Yes |

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|---|---|
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.5279801332388829 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.5 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 167 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| REACh Regulation | Free of Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| PVC free | Yes |
| Silicone-free | Yes |
| End of life manual availability | End Of Life Information |
| Take-back | No |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : End of commerc. - Block